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NO

HQ USAF KIRTLAND AFB NM//SE//
ALSAFECOM
ZEN 377ABW KIRTLAND AFB NM//SEG//
ZEN 150FW KIRTLAND AFB NM//SEG//
ZEN HQ AFOTEC KIRTLAND AFB NM//SE/SEG//
ZEN 58SOW KIRTLAND AFB NM//SE/SEG//
ZEN AFRL KIRTLAND AFB NM//SE/SEG//
INFO COMNAVSAFECEN NORFOLK VA//CODE 40//
CDRUSASC FORT RUCKER AL//CSSC-Z//
CMC WASHINGTON DC//SD//
COMDT COGARD WASHINGTON DC//G-KSE//
HQ USAF WASHINGTON DC//SE//

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SUBJECT: ALSAFECOM 002/99, PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR
LIQUID OXYGEN (LOX) SERVICING

1. MAJOR HAZARDS ASSOCIATED WITH THE OPERATIONAL USE OF LIQUID AND
GASEOUS OXYGEN ARE FIRE AND EXPLOSION. IN AN OXYGEN-RICH ENVIRONMENT,
THE BATTLE DRESS UNIFORM, SYNTHETIC FABRICS AND THE CHEMICAL WARFARE
DEFENSE ENSEMBLE (CWDE) MAY BECOME SATURATED WITH OXYGEN, IGNITE
READILY, AND BURN VIOLENTLY. TO DATE, THERE IS NEITHER AN INDUSTRY

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STANDARD ON THE WEAR OF BODY PROTECTION WHEN CONDUCTING LOX OPERATIONS NOR A TEST THAT CAN BE APPLIED TO ALL MATERIALS TO PRODUCE IGNITION TEMPERATURE VALUES. LEAKING OR SPILLED LIQUID OXYGEN CAN FORM POTENTIALLY DANGEROUS, HIGH CONCENTRATIONS OF OXYGEN GAS.

2. THE NATIONAL AERONAUTICAL AND SPACE ADMINISTRATION (NASA) AND THE AIR FORCE (AF) IN A JOINT PARTNERING EFFORT, MET FROM 16-18 MARCH 1999, AND CONCLUDED: " TO MINIMIZE THE UNKNOWN IGNITION POTENTIAL OF ELECTRO-STATIC DISCHARGE (ESD), 100 PERCENT COTTON, CUFFLESS, LONG-SLEEVED COVERALLS WILL BE WORN AS THE OUTER GARMENT WHEN FLOWING LOX. WHEN AN INDIVIDUAL MAY BE SPLASHED WITH LIQUID, A RUBBER APRON WILL ALSO BE WORN." THIS CHANGE WILL REMAIN IN EFFECT UNTIL THE ESD POTENTIAL OF CLOTHING IS TESTED AND CONFIRMED. THIS MESSAGE SUPERSEDES ALL AIR FORCE PUBLICATIONS FOR BODY PROTECTION DURING LOX SERVICING.

3. CALGON COMMERCIAL DIVISION, THE MANUFACTURER OF THE CHEMICAL WARFARE DEFENSE ENSEMBLE (CWDE), NSN: 8415011371704, STATES IN THEIR MATERIAL SAFETY DATA SHEET (MSDS), "FIRE AND EXPLOSION HAZARD DATA: CONTACT WITH STRONG OXIDIZERS SUCH AS OZONE, LIQUID OXYGEN, CHLORINE, PERMANGANATE, ETC. MAY RESULT IN FIRE. REACTIVITY DATA: MATERIALS TO AVOID: STRONG OXIDIZERS SUCH AS

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NO

OZONE, LIQUID OXYGEN, CHLORINE, PERMANGANATE, ETC." THE MSDS IS
AVAILABLE ON THE WORLD WIDE WEB AT:

[HTTP://WWW.HAZARD.COM/MSDS/H/Q202/Q150.HTML](http://WWW.HAZARD.COM/MSDS/H/Q202/Q150.HTML).

4. EFFECTIVE IMMEDIATELY, CHEMICAL PROTECTIVE SUITS WILL NOT BE WORN
WHEN SERVICING LOX IN AN EXERCISE OR TRAINING ENVIRONMENT. THE CWDE
WILL BE REMOVED PRIOR TO START OF LOX FLOW AND WILL NOT BE DONNED
UNTIL LINES ARE DISCONNECTED. PPE IN PARAGRAPH TWO WILL BE WORN.
5. IN AN ACTUAL COMBAT ENVIRONMENT, THE ON-SCENE COMMANDER WILL
CONDUCT A RISK ASSESSMENT TO DETERMINE WHEN THE CHEMICAL WARFARE
DEFENSE ENSEMBLE WILL BE WORN. POC FOR THIS SUBJECT IS SMS PENNIE
HARDESTY, HQ AFSC/SEGS, DSN 246-0827.

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